

REMARKS

Claims 1, 9 and 17 have been amended. After entry of this amendment, claims 1-20, 22, and 24 remain pending. In the present Office Action, claims 1 and 17 were rejected under 35 U.S.C. § 112, first paragraph. Claims 1-20, 22, and 24 were rejected under 35 U.S.C. § 102(e) as being anticipated by Part et al., U.S. Patent No. 6,430,156 ("Park"). Applicant respectfully traverses these rejections and requests reconsideration.

Section 102 Rejection

Applicant respectfully submits that each of claims 1-20, 22, and 24 recite combinations of features not taught or suggested in Park. For example, claim 1 recites a combination of features including: "a packet predictor, coupled to said at least one input port, for predicting information about a future packet in any one of the plurality of data flows based on history of previously received packets from the plurality of data flows...a plurality of queues for storing packets received from said plurality of sources, and for storing said predicted information about said future packet...and a processing core, coupled to said plurality of queues, wherein if said buffer logic validates said predicted information, notification is made to said direction logic which passes said Packet ID for said future packet to said processing core to initiate speculative processing".

Park teaches "a traffic control method for providing a guaranteed/predictive service which can guarantee a quality of service (QOS) by controlling transmission routes" (Park, abstract, lines 1-3). The portions of Park relied on by the Office Action to allegedly teach the features above have to do with the predictive service. However, the predictive service has nothing to do with prediction information about a future packet, or speculatively processing the predicted information about a future packet. Park teaches the following with regard to a predictive service: "In the case of the predictive service, it should be considered to guarantee the quality of service QOS and to efficiently use the resources. That is, a necessary quality of service should be guaranteed by efficiently using a small volume of resources. It is not preferable to completely guarantee the quality

of service QOS by consuming a large volume of resources." (Park, col. 1, lines 48-56). Thus, the predictive service has nothing to do with predicting information about a future packet. Rather, the predictive service is one of several types of QOS.

The Office Action asserts that Park teaches "a packet predictor, coupled to said at least one input port, for predicting information about a future packet in any one of the plurality of data flows based on history of previously received packets from the plurality of data flows" at col. 3, lines 40-47. Applicant respectfully disagrees. These teachings are: "It is therefore a primary object of the present invention to provide a traffic control method for providing a predictive service which can effectively control the predictive service by controlling transmission routes of various traffic data with a policing function using a moving ceiling MC method and a packet scheduling function using the first in first out FIFO method, in the condition that it is presumed that a proper amount of resources is assigned to calls." Nothing in this section teaches or suggests "predicting information about a future packet in any one of the plurality of data flows based on history of previously received packets from the plurality of data flows". No prediction of anything is found in these teachings. Instead, various scheduling functions are used to control traffic that is assigned the predictive service level of QOS.

The Office Action further asserts that Park teaches "a processing core, coupled to said plurality of queues, wherein if said buffer logic validates said predicted information, notification is made to said direction logic which passes said Packet ID for said future packet to said processing core to initiate speculative processing" at col. 6, line 66-col. 7, line 15. Applicant respectfully disagrees. These teachings are: "The passing conditions of the MC method according to the first and second embodiments of the present invention implies that, when it is presumed that a number of the packets allowed to be passed in each window is A, a number of the packets stored by a history of previous windows (a volume of the traffics which have been transmitted) is B (namely when fewer packets are inputted), a number of the packets used by borrowing by the previous history is C (namely when the packets more than the average are passed), and a size of a buffer for reducing a change is D, in the condition that a new window (w) is started and 'a' packets

are currently passed, if a new packet is inputted, the packet is passed when ' $A+B+D-a$ ' is greater than ' 0 ' ($A+B+D-a>0$) in the case that the packets less than the average by B are inputted, and the packet is passed when ' $A-C+D-a$ ' is greater than ' 0 ' ($A-C+D-a>0$) in the case that the packets more than the average by C are inputted." Nothing in this section teaches a processing core at all. Furthermore, nothing teaches speculative processing, in the processing core, of predicted information regarding a future packet. Rather, this section teaches borrowing unused packet slots from previous windows to allow more packets to be transmitted in a new window. No prediction of anything is performed, and no speculative processing is performed.

For at least all of the above stated reasons, Applicant respectfully submits that claim 1 is patentable over the cited art. Claims 2-8, being dependent from claim 1, are similarly patentable over the cited art for at least the above stated reasons. Each of claims 2-8 recites additional combinations of features not taught or suggested in the cited art.

Claim 9 recites a combination of features including: "a packet predictor, coupled to said input, for predicting information about the future packets, based upon the information received about the non-predicted packets; a plurality of queues, coupled to said input and said packet predictor, for storing the predicted information; and a processing core, coupled to said plurality of queues, for processing the predicted information before the future packets are received by said input". The Office Action relies on the same teachings of Park highlighted above with regard to claim 1 to allegedly teach the above highlighted features of claim 9. Applicant respectfully submits that Park does not teach or suggest the above highlighted features of claim 9, either. Accordingly, claim 9 is patentable over Park. Claims 10-16, being dependent from claim 9, are similarly patentable over the cited art for at least the above stated reasons. Each of claims 10-16 recites additional combinations of features not taught or suggested in the cited art.

Claim 17 recites a combination of features including: "predicting future information about future packets from the stored history; ... processing the future information about the future packets before the future packets are received". The Office Action relies on the same teachings of Park highlighted above with regard to claim 1 to allegedly teach the above highlighted features of claim 17. Applicant respectfully submits that Park does not teach or suggest the above highlighted features of claim 17, either. Accordingly, claim 17 is patentable over Park. Claims 18-20, 22, and 24, being dependent from claim 17, are similarly patentable over the cited art for at least the above stated reasons. Each of claims 18-20, 22, and 24 recites additional combinations of features not taught or suggested in the cited art.

Section 112 Rejection

The Office Action asserts that claims 1 and 17 are not enabled. Applicant respectfully disagrees. Nevertheless, Applicant has made minor amendments using equivalent language to further clarify claims 1 and 17.

Specifically, the Office Action asserts that claim 1 claims a plurality of queues in which future packets are stored. Applicant respectfully disagrees. Claim 1 recites storing predicted information about future packets. It is possible that the Office Action is referring to the features recited with respect to the direction logic. Applicant respectfully submits that a proper understanding of the unamended features does not recite storing the future packet in the plurality of queues. However, Applicant has amended claim 1 to recite: "generating a Packet ID for said future packet, wherein said Packet ID is stored in one of said plurality of queues". Applicant respectfully submits that the amendment further illustrates the impropriety of the rejection.

The Office Action further asserts that claims 1 and 17 are unclear because they do not explicitly state how predicted information is validated and what the predicted information is validated against. Applicant respectfully disagrees. For example, claim 1 recites "buffer logic, coupled to said packet predictor, for accessing said memory and for

validating said predicted information about said future packet based on said access to said memory". Thus, it is clear what the predicted information is validated against. The validation may involve any of a number of implementations, and specifying the specific validation is not necessary for clarity. As set forth in MPEP 2173.04, breadth is not indefiniteness. One of skill in the art is reasonably apprised of the meaning of the claim, and thus the claim meets the requirements of 35 U.S.C. § 112. Similar comments apply to claim 17.

CONCLUSION

Applicant submits that the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions.

Also enclosed herewith are the following items:

Respectfully submitted,

/James W. Huffman/

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